FOCAL LENGTH DISPERSION COMPENSATION FOR FIELD CURVATURE

ABSTRACT OF THE DISCLOSURE

An optical arrangement and method are provided for receiving a light beam having a plurality of spectral bands and directing subsets of the spectral bands along optical paths to respective optical elements. The light beam is received at an input port. The optical elements which route the spectral bands are configured as a substantially planar array. A dispersive element is configured to ~~diffract~~ angularly spread the light beam, after it has been collimated, into a plurality of angularly separated beams that correspond to the plurality of spectral bands. A first focusing element is disposed with respect to the dispersive element and with respect to the array of optical elements such that ~~dispersion in the focal distance of the first focusing element for different angularly separated beams compensates for field curvature aberration caused by the first focusing element.~~ variation of focal length with wavelength of the separated beams is compensated by the field curvature of the system, and the final image surface is flattened.

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